

IN THE CLAIMS:

1. (original) A stiffened dilating balloon comprising:
an expandable balloon including a plurality of longitudinally discontinuous
stiffening members disposed along a perimeter of said balloon;
wherein said balloon is made of a flexible material;
wherein the stiffening members are less flexible than said balloon; and
wherein each stiffening member affects a configuration of an area of said
perimeter.

2. (original) The balloon of claim 1 wherein the stiffening members are
longitudinally aligned.

3. (original) The balloon of claim 1 wherein the stiffening members are
arranged at said perimeter in a staggered configuration.

4. (original) The balloon of claim 3 wherein the stiffening members are
arranged in a grid pattern.

5. (original) The balloon of claim 1 wherein at least one of the stiffening
members overlaps another one of the stiffening members.

6. (original) The balloon of claim 1 wherein at least one of the stiffening
members interdigitates with another one of the stiffening members.

7. (original) The balloon of claim 1 wherein at least one of the stiffening
members is connected to another one of the stiffening members by a filament.

8. (original) The balloon of claim 1 wherein the stiffening members have a
geometric shape.

9. (original) The balloon of claim 1 wherein the stiffening members have a curved cross-section.

10. (original) The balloon of claim 1 wherein the stiffening members have a polygonal cross-section.

11. (original) The balloon of claim 1 wherein the stiffening members include raised surfaces.

12. (original) The balloon of claim 11 wherein the raised surfaces are substantially smooth.

13. (original) The balloon of claim 11 wherein the raised surfaces are substantially pointed.

14. (original) The balloon of claim 11 wherein the raised surfaces are sufficiently sharp to pierce an occlusion.

15. (original) The balloon of claim 11 wherein the raised surfaces have a saw-tooth configuration.

16. (original) The balloon of claim 1 wherein the stiffening members are disposed along the perimeter of only a central section of said balloon.

17. (original) The balloon of claim 1 wherein at least one of the stiffening members comprises means for engaging an occlusion in a lumen.

18. (original) The balloon of claim 1 wherein at least one of the stiffening members comprises means for piercing an occlusion in a lumen.

19. (original) The balloon of claim 1 wherein at least one of the stiffening members comprises means for temporarily retaining a stent.

20. (original) The balloon of claim 1 wherein at least one of the stiffening members comprises means for temporarily retaining a stent-graft.

21. (original) The balloon of claim 1 wherein at least one of the stiffening members is located within said balloon abutting an inner surface of said balloon.

22. (original) The balloon of claim 1 wherein at least a portion of one of the stiffening members is radio-opaque.

23. (original) The balloon of claim 1 wherein the stiffening members are disposed on a sheet of material adapted to be applied to said balloon.

Claims 24-32 (withdrawn).

33. (original) A stiffened balloon comprising:
an expandable balloon including a plurality of longitudinally continuous stiffening members disposed along a perimeter of said balloon;
wherein said balloon is made of a flexible material;
wherein the stiffening members are less flexible than said balloon;
wherein each stiffening member affects a configuration of an area of said perimeter; and

wherein at least one of the stiffening members includes a raised surface.

34. (original) The balloon of claim 33 wherein the raised surfaces are substantially pointed.

35. (original) The balloon of claim 33 wherein the raised surfaces are sufficiently sharp to pierce an occlusion.

36. (original) The balloon of claim 33 wherein the raised surfaces have a saw-tooth configuration.

37. (original) The balloon of claim 33 wherein the stiffening members are disposed along the perimeter of only a central section of said balloon.

38. (original) The balloon of claim 33 wherein at least one of the stiffening members comprises means for engaging an occlusion in a lumen.

39. (original) The balloon of claim 33 wherein at least one of the stiffening members comprises means for piercing an occlusion in a lumen.

40. (original) The balloon of claim 33 wherein the stiffening members are disposed on a sheet of material adapted to be applied to said balloon.

Claims 41-44 (withdrawn).

45. (original) A stiffened balloon comprising:

an expandable balloon including a plurality of longitudinally continuous stiffening members disposed along a perimeter of said balloon;
wherein said balloon is made of a flexible material;
wherein the stiffening members are less flexible than said balloon;
wherein each stiffening member affects a configuration of an area of said perimeter; and

wherein at least one of the stiffening members includes a pivot point where the stiffening member may be bent to facilitate navigation of the balloon through a passage.

Claims 46-47 (withdrawn).